

## Claims

1. In a communication system, a method comprising:
  - 2 determining a number of available fingers in a receiver of said communication system;
  - 4 adjusting a threshold based on said number of available fingers.
2. The method as recited in claim 1, wherein said  
2 threshold is a pilot signal search window threshold.
3. The method as recited in claim 2 further comprising:
  - 2 receiving a signal;
  - 4 assigning at least a finger from said number of available fingers to said received signal;
  - 6 wherein said adjusting of said pilot signal search window threshold allows assigning more or less of fingers to said received signal.
4. The method as recited in claim 3 further comprising:
  - 2 assigning more or less of fingers to said received signal after said adjusting said pilot signal search window
  - 4 threshold.

5. The method as recited in claim 2 further comprising:

2 receiving a pilot signal;

correlating with said received pilot signal within a  
4 search window;

comparing correlation energy of said received pilot  
6 signal to said adjusted search window threshold.

6. The method as recited in claim 5 further comprising:

2 accepting or denying a processing of a received signal  
based on whether said received pilot signal meets said  
4 adjusted search window threshold in said comparing.

7. The method as recited in claim 6, wherein said  
2 received signal is associated with said received pilot  
signal.

8. The method as recited in claim 1 wherein said  
2 threshold is a lock/unlock threshold.

9. The method as recited in claim 8 further comprising:

2 receiving a signal;

assigning at least a finger from said number of  
4 available fingers to said received signal;

wherein said adjusting of said lock/unlock threshold  
6 allows more or less of said least assigned finger to switch

from a lock condition to a unlock condition or from said  
 8 unlock condition to said lock condition.

10. The method as recited in claim 9 further comprising:  
 2 switching at least said least assigned finger from  
 said lock condition to said unlock condition or from said  
 4 unlock condition to said lock condition.

11. The method as recited in claim 1, wherein said  
 2 determining includes:

determining a number of fingers in a lock/unlock  
 4 condition; wherein said determining of said number of  
 available fingers is based on said number of fingers in  
 6 said lock/unlock condition.

12. The method as recited in claim 1, wherein said  
 2 determining includes:

determining a time period of lock/unlock condition of  
 4 a number of fingers in a lock/unlock condition; wherein  
 said determining of said number of available fingers is  
 6 based on said time period of lock/unlock condition of said  
 number of fingers in said lock/unlock condition.

13. The method as recited in claim 1 wherein said  
 2 threshold is a combine/un-combine threshold.

14. The method as recited in claim 13 further comprising:

- 2       receiving a signal;
- assigning at least a finger to said received signal;
- 4       wherein said adjusting of said combine/un-combine
- threshold allows more or less of said least assigned finger
- 6       to switch from a combine condition to a un-combine
- condition or from said un-combine condition to said combine
- 8       condition.

15. The method as recited in claim 14 further comprising:

- 2       switching at least said least assigned finger from
- said combine condition to said un-combine condition or from
- 4       said un-combine condition to said combine condition.

16. The method as recited in claim 1, wherein said

- 2       determining includes:
- determining a number of fingers in a combine/un-
- 4       combine condition; wherein said determining of said number
- of available fingers is based on said number of fingers in
- 6       said combine/un-combine condition.

17. The method as recited in claim 1, wherein said

- 2       determining includes:
- determining a time period of combine/un-combine
- 4       condition of a number of fingers in a combine/un-combine
- condition; wherein said determining of said number of

6 available fingers is based on said time period of  
combine/un-combine condition of said number of fingers in  
8 said combine/un-combine condition.

18. The method as recited in claim 1, wherein said  
2 determining includes:

determining a number of fingers in an assign/un-assign  
4 condition; wherein said determining of said number of  
available fingers is based on said number of fingers in  
6 said assign/un-assign condition.

19. The method as recited in claim 1 further comprising:  
2 determining at least one of Active set, Candidate set,  
and Neighbor set of base stations in said communication  
4 system, wherein each set identifies a set of base stations  
for communication with a mobile station in said  
6 communication system, wherein said Active set identifies a  
set of base stations assigned for communication with said  
8 mobile station, wherein said Candidate set identifies a set  
of base stations with sufficient pilot signal strength at  
10 said mobile station and for communication with said mobile  
station, wherein said Active set is exclusive of said  
12 Candidate set, wherein said Neighbor set identifies a set  
of base stations for possible communication with said  
14 mobile station, wherein said Neighbor set is exclusive of  
said Active and Candidate sets;

16 moving at least one base station from one set to  
another set among said Active, Candidate and Neighbor sets  
18 of base stations based on said adjusting said threshold  
based on said number of available fingers.

20. The method as recited in claim 1 wherein said  
2 threshold is at least one of an add-threshold and a drop-  
threshold.

21. The method as recited in claim 20 wherein at least one  
2 of said add-threshold and said drop-threshold is associated  
with at least one of Active set, Candidate set, and  
4 Neighbor set of base stations in said communication system,  
wherein each set identifies a set of base stations for  
6 communication with a mobile station in said communication  
system, wherein said Active set identifies a set of base  
8 stations assigned for communication with said mobile  
station, wherein said Candidate set identifies a set of  
10 base stations with sufficient pilot signal strength at said  
mobile station and for communication with said mobile  
12 station, wherein said Active set is exclusive of said  
Candidate set, wherein said Neighbor set identifies a set  
14 of base stations for possible communication with said  
mobile station, wherein said Neighbor set is exclusive of  
16 said Active and Candidate sets.

22. The method as recited in claim 20 wherein at least one  
 2 of said add-threshold and said drop-threshold is associated  
 with determining a number of fingers in a lock/unlock  
 4 condition.

23. The method as recited in claim 20 wherein at least one  
 2 of said add-threshold and said drop-threshold is associated  
 with determining a number of fingers in a combine/un-  
 4 combine condition.

24. The method as recited in claim 20 wherein at least one  
 2 of said add-threshold and said drop-threshold is associated  
 with correlation of a pilot signal in a search window.

25. An apparatus in a communication system comprising:  
 2 a controller configured for determining a number of  
 available fingers in said communication system, wherein  
 4 said controller further is configured for adjusting a  
 threshold based on said number of available fingers.

26. The apparatus as recited in claim 25 wherein said  
 2 threshold is a pilot signal search window threshold.

27. The apparatus as recited in claim 26 further  
 2 comprising:

a pilot signal searcher configured for searching for  
 4 pilot signals, and further configured for comparing signal  
 energies of said searched pilot signals with said adjusted  
 6 pilot signal search window threshold.

28. The apparatus as recited in claim 25 wherein said  
 2 threshold is a lock/unlock threshold.

29. The apparatus as recited in claim 28 further  
 2 comprising:

at least a finger resource configured for correlating  
 4 with at least one received signal;

wherein a condition of said least finger is either a  
 6 lock condition or a unlock condition, said least finger is  
 further configured to switch from said lock condition to  
 8 said unlock condition or from said unlock to said lock  
 condition based on whether signal energy of said received  
 10 signal meets said adjusted lock/unlock threshold.

30. The apparatus as recited in claim 25 wherein said  
 2 threshold is a combine/un-combine threshold.

31. The apparatus as recited in claim 30 further  
 2 comprising:

at least a finger resource configured for correlating  
 4 with at least one received signal;



wherein a condition of said least finger is either a  
6 combine condition or a un-combine condition, wherein said  
least finger is further configured to switch from said  
8 combine condition to said un-combine condition or from said  
un-combine condition to said combine condition based on  
10 whether signal energy of said received signal meets said  
adjusted combine/un-combine threshold.

32. The apparatus as recited in claim 25 wherein said  
2 controller further is configured to determine at least one  
of Active set, Candidate set, and Neighbor set of base  
4 stations in said communication system, wherein each set  
identifies a set of base stations for communication with a  
6 mobile station in said communication system, wherein said  
Active set identifies a set of base stations assigned for  
8 communication with said mobile station, wherein said  
Candidate set identifies a set of base stations with  
10 sufficient pilot signal strength at said mobile station and  
for communication with said mobile station, wherein said  
12 Active set is exclusive of said Candidate set, wherein said  
Neighbor set identifies a set of base stations for possible  
14 communication with said mobile station, wherein said  
Neighbor set is exclusive of said Active and Candidate  
16 sets;

wherein said controller is further configured for  
18 moving at least one base station from one set to another

set among said Active, Candidate and Neighbor sets of base  
20 stations based on said adjusting said threshold based on  
said number of available fingers.

33. In a communication system, a method comprising:

- 2 determining a number of available fingers in a  
receiver of said communication system;
- 4 adjusting a pilot signal search window threshold based  
on said number of available fingers;
- 6 correlating with a received pilot signal within a  
search window;
- 8 comparing correlation energy of said received pilot  
signal to said adjusted search window threshold;
- 10 determining an assigned number of fingers, from said  
number of available fingers, to a received signal after  
12 said adjusting said pilot signal search window threshold.

34. An apparatus in a communication system comprising:

- 2 a controller configured for determining a number of  
available fingers in said communication system, wherein
- 4 said controller further is configured for adjusting a pilot  
signal search window threshold based on said number of
- 6 available fingers;
- 8 a pilot signal searcher configured for searching for  
pilot signals, and further configured for comparing signal

energies of said searched pilot signals to said adjusted  
10 pilot signal search window threshold.